

[illegible]

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	10	20	30	40	50	60
Baebilis16S.SEQ	---	---	---	---	---	---
Banthracis16S.SEQ	---	---	---	---	---	---
Efaecalis 16S.SEQ	---	---	---	---	---	---
Llactis 16S.SEQ	---	---	---	---	---	---
Laonocyt16S.SEQ	---	---	---	---	---	---
Saureus16S.SEQ	---	---	---	---	---	---
Smutsans16S.SEQ	---	---	---	---	---	---
Spneumon16S.SEQ	---	---	---	---	---	---
Spvogenes16S.SEQ	---	---	---	---	---	---
Maviu16S.SEQ	---	---	---	---	---	---
Mcb16S.SEQ	---	---	---	---	---	---
Ecoli o157 16S.SEQ	---	---	---	---	---	---
Xpneumonias 16S.SEQ	---	---	---	---	---	---
Actinol16S.SEQ	---	---	---	---	---	---
Hinfluenzae 16S.SEQ	---	---	---	---	---	---
Bbrnchiseptica 16S.SEQ	---	---	---	---	---	---
Bparaptus16S.SEQ	---	---	---	---	---	---
Bpertussis 16S.SEQ	---	---	---	---	---	---
Bcopacia 16S.SEQ	---	---	---	---	---	---
Bmal16S.SEQ	---	---	---	---	---	---
Bpseudomallei 16S.SEQ	---	---	---	---	---	---
Ngonorhoeae 16S.SEQ	---	---	---	---	---	---
Nmening 16S.SEQ	---	---	---	---	---	---
Paeruginosa 16S.SEQ	---	---	---	---	---	---
Vcholerae 16S.SEQ	---	---	---	---	---	---
Yenterocolitica 16S.SEQ-N	---	---	---	---	---	---

FIG. 2A-1

100221" 26E62001

Alignment Report of Gram +8- 16S align.MEG, using Clustal method with Weighted residue weight table.

Tuesday, November 27, 2001 4:14 PM

	70	80	90	100	110	120	130	140	150	160	170
Bautilis16S.SEQ	..G..G..AT..G..G..	..C..C..ATGT..	..C..	..CAAG..	..C..	..CAAG..	..T..C..TAA..CT..	..C.G..	..C.G..	..C.G..	..166
Banthracis16S.SEQ	..G..G..TG..ATTA..G..	..CT..A..AAGT..	..C..	..CAAG..	..T..C..CATAA..CT..	..C.G..	..C.G..	..C.G..	..C.G..	..C.G..	..164
Efaecalis16S.SEQ	..A..TT..G..A..AGG..	..C..	..CAAG..	..T..C..A..CAACA..G..	..ACT..	..A..GT..	..A..GT..	..A..GT..	..A..GT..	..A..GT..	..155
Llactis16S.SEQ	..T..G..C..G..AG..TTC..GTA..TAC..	..GACTG..T..CA..A..	..C..	..CAAG..	..G..T..TTC..C..G..	..C..	..ATT..	..C..	..C..	..C..	..184
Lmonocytis16S.SEQ	..G..G..G..ACCA..G..	..CT..CAAGT..	..C..	..CAAG..	..C..C..TAA..TTC..	..T.G..	..C.G..	..C.G..	..C.G..	..C.G..	..175
Saureus16S.SEQ	..G..G..G..ACCA..G..	..C..ATGT..	..C..	..CAAG..	..AT..A..C..G..	..T..	..A..	..A..	..A..	..A..	..162
Smutans16S.SEQ	..G..G..CA..CG..AAC..C..CTGT..	..ACACGCTTT..CTT..	..C..A..	..CAAG..	..C..G..A..T..C..	..G..A..C..G..	..T..	..A..	..A..	..A..	..70
Spneumon16S.SEQ	..A..C..G..AG..AGCACT..T..	..CTC..G..AT..	..T..A..	..CAAG..	..C..G..A..T..C..A..C..A..C..G..	..T..	..A..	..A..	..A..	..A..	..131
Spnogesis16S.SEQ	..A..G..C..CT..CGAG..T..ACT..	..ACT..	..A..	..CAAG..	..TG..T..CTGCACCTTC..	..GCTG..	..T..GCT..	..T..GCT..	..T..GCT..	..T..GCT..	..170
Naviun16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..166
Mcb16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..173
Ecoli o157 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..175
Kpneumoniae 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..170
Lactinol16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..142
Hinfluenzae 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..168
Abnorchiseptica 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..172
Spapartusis16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..144
Spertusis 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..223
Ecspacia 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..176
Emallei 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..176
Epseudomallei 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..176
Ngonorrhoeae 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..172
Rmening 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..172
Paeruginosa 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..173
Vcholerae 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..175
Yenterocolitica 16S.SEQ	..G..G..G..CA..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..G..G..G..	..175

FIG. 2A-2

200221 266200T

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.

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	180	190	200	210	220	230	240	250	260	270	280
Bsubtilis16S.SEQ	..G..GGTGTGACGC.T.GTTCAAACATAAA..TGCT..GGTACCA.TTA.A..GA..GGGC.C..T..A..A..A..G.G 286										
Banthracis16.SEQ	..G...A.TTGG.AC.GC.T.GTTC.AA.TTCAAA..GGCT..GGTGTCA.TTAT..A..GA..GGC.C.C..T..A..A..A..G.G 284										
Efaecalis 16S.SEQ	...AGTTT.T.C.C.T.GCADA..GTGAAA..GCTT..GGTGTG.TGAT..GA..GGGT.C..T..A..A..A..G.A 275										
Llactis 16S.SEQ	...AAA.TTT.A..AC...TTTBA.TTTCAAA.ATCCAA..TG--CATCA.TCAA..AT..GGG.T.T..T..A..A..A..T..A.A 293										
Lmonocyt16S.SEQ	...A..G.TAAA.TGT.G.GC.T.CCAC.CTTTGTGAAA.ATGTTT..GGTATC..TTA.A..G..GGGT.C..T..A..A..A..G.A 304										
Saureus16S.SEQ	...G...TA.TTGG.AC.GC.T.GTTC.AA..GTCA.AA.GGT..TG--CATCA.T.CTA..GA..GGGT.C..T..A..A..A..A.G 294										
Smutans16S.SEQ	...TA.TAATATGTC.T.AATAT..TTGAAA.ATCCAA.G--CATCA.T.CTA..GA..GGGT.C..T..A..A..A..A.A 293										
Spneumon16S.SEQ	...GAGT.G.T.TTGC.T.ACATTT.CTAAAA..TGCA..TG--CATCA.T.C.A..GA..GGGT.C..T..A..A..A..A.A 280										
Spnyogenes16S.SEQ	...GAGA.ACTA..GC.T.TTA.TAATTTAAAA..GGCA.TG--CTCCA.T..GA..GGGT.C..T..A..A..A..A.A 188										
Navium16S.SEQ	...G..GGAC.T...GC.T..TCTTCTGTGAAA..--TT.TG-----C.GTG.G...G..GGGT.C..T..A..A..A..A.A 243										
Mtb16S.SEQ	...G..GGAC.A.GG..TCT.T.TGTTGAAA..GCTT.AG-----C.GTG.G...A..GGGT.C..T..A..A..A..A.A 284										
Ecoli o157 16S.SEQ	CCCATATGTCAGACCAAG--AGGGGACCTTCGGG---CTCT--TGCCATGGATGTGCCAGATGAGTATAGTACTAGTCTAGGAGATGCC 286										
Kpneumoniae 16S.SEQ	...G..GA...GG...G...T.C...T.NT...G.A-----GA..A..AG..T..G..T..A..CT..A..C..G..G 284										
Lactinol16S.SEQ	...G..TTA...G...TG...T.C...TGAGA...G.A-----GA..A..AG..T..G..T..A..CT..A..C..TG...T 286										
Hinfluenzae 16S.SEQ	...GGC.TACG.GGG...C...T...G-----CA.T..T..GGG..G.T..C..T...T...CT..A..A..A..G 281										
Bbronchiseptica 16S.SEQ	...GGC.TACG.GGG...C...T...G-----CA.T..T..GGG..G.T..C..T...T...CT..A..A..A..G 253										
Bparapertussis16S.SEQ	...GGC.TACG.GGG...C...T...G-----CA.T..T..GGG..G.T..C..T...T...CT..A..A..A..G 279										
Bpertussis 16S.SEQ	...GCA.TACG.TG...C...T...G-----CA.T..T..GGG..G.T..C..T...T...CT..A..A..A..G 282										
Bcepacia 16S.SEQ	...GCA.TACG.TG...C...T...G-----CA.T..T..GGG..G.T..C..T...T...CT..A..A..A..G 285										
Bmallei 16S.SEQ	...GCA.TACG.TG...C...T...G-----CA.T..T..GGG..G.T..C..T...T...CT..A..A..A..G 285										
Bpseudomallei 16S.SEQ	...GCA.TACG.TG...C...T...G-----CA.T..T..GGG..G.T..C..T...T...CT..A..A..A..G 285										
Ngonorrhoeae 16S.SEQ	...GGTGTG.GAGGG...CA...TG-----C..T..A..G.TG..G.TGGCT...T...A..CT..A..A..AG 334										
Nmening 16S.SEQ	...GGTGTG.GAGGG...CA...TG-----C..T..A..G.TG..G.TGGCT...T...A..CT..A..A..AG 287										
Paeruginosa 16S.SEQ	...GGTGTG.GAGGG...CA...TG-----C..T..A..G.TG..G.TGGCT...T...A..CT..A..A..AG 287										
Vcholerae 16S.SEQ	...GGTGTG.GAGGG...CA...TG-----C..T..A..G.TG..G.TGGCT...T...A..CT..A..A..AG 284										
Yenterocolitica 16S.SEQ	...GGTGTG.GAGGG...CA...TG-----C..T..A..G.TG..G.TGGCT...T...A..CT..A..A..AG 286										

FIG. 2A-3

T0022T" 26E6200T

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	290	300	310	320	330	340	350	360	370	380	390	400
Baebicilis16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Banthracis16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Elaecalis16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Llactis16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Lmonocy16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Saureus16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Smutans16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Spneumon16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Spvogensis16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Navium16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Mtbl16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Ecoli 0157 16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Kpneumonias16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Aactinol16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Hinfluenzae16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Abnorchiseptica16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Bparapertussis16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Bpertussis16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Bcepacia16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Bmallei16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Bpseudomallei16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Bngonorrhoeae16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Bkmening16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Bparaglinosa16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Bcholerae16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G
Benterocolitica16S.SEQ	..C.AC	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G	..G..T.G

FIG. 2A-4

100221 26E6200T

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	410	420	430	440	450	460	470	480	490	500	510	520
Baebille16S.SEQ	AG..T..TT..	A.C..	CT..G..TGTAA..	A..CAA..T..C..GTTGG..	GGGG..TA..C..	G..	TAA..CAG..A..CC..	..	..	..	..	..
Banthracis16S.SEQ	AG..T..	T..	C..	ACT..G..TGTAA..	A..CAA..TTC..T..GT..G..	AGC..G..A..C..	G..	TAA..CAG..A..CC..	..	..	..	..
Elaealis16S.SEQ	AG..	TT..	A.C..	ACT..G..TGTAA..	A..CAA..CCTT..	A..C..GAAC..-..TC..CC..	G..	T..TAA..CAG..A..CC..	..	..	..	..
Llaealis16S.SEQ	AG..	TT..	A.C..	ACT..G..TGTAA..	A..CAA..CCTT..GTG..G..	GG..-..AGC..CATCA..G..	G..A..TAC..CAG..A..G..G..	..	..	..	..	..
Laonocyt16S.SEQ	AG..	TT..	A.C..	ACT..G..TGTAA..	A..CAA..TA..G..A..C..-..GC..	TC..C..	G..T..TAA..CAG..A..CC..	..	..	..	..	..
Saureus16S.SEQ	AG..	T..	A.C..	ACT..G..T..TTA..	A..CATATGTT..	A..C..GTGC..-..A..ATC..	G..	TATATCAG..A..CC..	..	..	..	..
Smultans16S.SEQ	AG..	TT..	A.C..	CT..G..TGTAA..TC..A..	CGT..TGTG..G..	GG..-..AG..CA..A..G..	G..G..T..TAA..CAG..A..G..G..	..	..	..	..	..
Spneumon16S.SEQ	AG..	TT..	A.C..	CT..G..TGTAA..	A..CGA..TGTG..G..	GG..-..AG..CA..A..TG..	G..T..TAA..CAG..A..G..G..	..	..	..	..	..
Spvogues16S.SEQ	AG..	TT..	A.C..	CT..G..TGTAA..	A..TGAT..GTGG..	GG..-..AA..CCA..CA..G..	G..A..TAA..CAG..A..G..G..	..	..	..	..	..
Maviun16S.SEQ	GGG..T..C..	..	..	CCT..	C..ATC..C..	..-..T..-..CCGG..	..	CT..GG..	..	G..GGTG..	..	..
Mtbi16S.SEQ	GGG..T..C..	..	..	CCT..	C..ATC..C..	..-..T..-..CCGG..	..	CT..GG..	..	G..GGTG..	..	..
Ecoli o157 16S.SEQ	TATGAGAGGCGCTTCGGTGTAAAGTACTTCACGGGGGGA	..	..	..	..	..	..	..	..	..	..	..
Kpneumoniae 16S.SEQ	G..	..	..	..	..	..	..	..	..	..	..	..
Actinoid16S.SEQ	A..	..	..	..	..	..	..	..	..	..	..	..
Hinfluenzae 16S.SEQ	A..	..	..	..	..	..	..	..	..	..	..	..
Bronchiseptica 16S.SEQ	T..	..	..	..	..	..	..	..	..	..	..	..
Spertus16S.SEQ	GC..T..	..	..	..	..	..	..	..	..	..	..	..
Spertus16S.SEQ	GC..T..	..	..	..	..	..	..	..	..	..	..	..
Bcepacia 16S.SEQ	G..	..	..	..	..	..	..	..	..	..	..	..
Bmallei 16S.SEQ	G..	..	..	..	..	..	..	..	..	..	..	..
Bpseudomallei 16S.SEQ	G..	..	..	..	..	..	..	..	..	..	..	..
Ngonorhoeae 16S.SEQ	C..	..	..	..	..	..	..	..	..	..	..	..
Nmening 16S.SEQ	C..	..	..	..	..	..	..	..	..	..	..	..
Paeruginosa 16S.SEQ	G..	..	..	..	..	..	..	..	..	..	..	..
Vcholerae 16S.SEQ	..	..	..	..	..	..	..	..	..	..	..	..
Yenterocolitica 16S.SEQ	..	..	..	..	..	..	..	..	..	..	..	..

FIG. 2A-5

100227 1656200T

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	530	540	550	560	570	580	590	600	610	620	630	640
Bautilis16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Banthracis16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Efaecalis16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Llactis16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Lmonocyt16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Saureus16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Smutsans16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Spneumon16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Spyoogenes16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Maviun16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
ME16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Eccli o157 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Kneumonias 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Actinob16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Hinfluenzae 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Bronchiseptica 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Bparapertussis16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Bpartussis 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Bcepacia 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Bmallei 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Bpseudomallei 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Ngonorrhoeae 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Nmening 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Paaruginosa 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Vcholerae 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..
Yenterocolitica 16S.SEQ	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..	.....T..TG..

FIG. 2A-6

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.

[illegible]

100221" 26662001

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
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	770	780	790	800	810	820	830	840	850	860	870	880
Deubtili16S.SEQGGGGGGGGGGGG
Bantracis16.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Zfaecalis 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Ilactis 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Imonocyt16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Saureus16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Smuts16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Syneumon16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Spyogenes16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Mavi16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Ecoli 0157 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Xpneumonise 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Actinol16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Hinfluenzae 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Bronchiseptica 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Bparapertussis16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Bparapertussis 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Bcepacia 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Bmal16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Bpseudomallei 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Ngonorhoeae 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Nmaning 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Paeruginosa 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Vcholerae 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G
Yenterocolitica 16S.SEQ	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G	.....G

FIG. 2A-8

FOO22T 46E6200T

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
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	890	900	910	920	930	940	950	960	970	980	990	1000
Bsubtilis16S.SEQT.....	AC.G.....	G.....	A.....	A.....	T 1000
Banthracis16.SEQ	.....C.G.....	G.....	.....	.....	.....	.....	.....	.....	A.....	A.....	.....	T 1000
Efaecalis 16S.SEQ	.....A.....	G.....	G.....	.....	.....	.....	.....	.....	A.....	A.....	.....	T 990
Llactis 16S.SEQ	.....A.....	G.....	G.....	.....	.....	.....	.....	.....	A.....	A.....	.....	A.T 1007
Lmonocyt16S.SEQ	.....A.....	G.....	G.....	.....	.....	.....	.....	.....	A.....	A.....	.....	T 1018
Saureus16S.SEQ	.....A.....	G.....	G.....	A.....	.....	.....	.....	.....	AAA.....	.....	.....	T 1009
Smutans16S.SEQ	.....A.....	G.....	G.....	.....	.....	.....	.....	.....	A.....	A.....	.....	C 1008
Spneumon16S.SEQ	.....A.....	G.....	G.....	.....	.....	.....	.....	.....	A.....	A.....	.....	C 995
Spvogenes16S.SEQ	.....A.....	G.....	G.....	.....	.....	.....	.....	.....	A.....	A.....	.....	C 903
Mavium16S.SEQ	.....N.....	C.....	G.....	.....	N.....	C.....	.....	.....	A.....	A.....	.....	GT.....G.. 951
Mtblis.SEQ	.....C.....	.....	G.....	.....	.....	C.....	.....	.....	A.....	A.....	.....	GT.....G.. 992
Ecoli o157 16S.SEQ	GCCTGGCGATACGGCCCGCCAGGTTAAACTCAATGATGCGGGGGCCGCCACAGCGGTGGAGCATGTGTTTAAATTCGATGCGAGAGACCTTACCTGCTCTTGACATCCA	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1000
Kneumonias 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	992
Actinolis.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G 996
Hinfluenzae 16S.SEQ	.....	.....	.....	.....	N.....	.....	.....	.....	.....	.....	.....	T 998
Bronchiseptica 16S.SEQ	.....T.....	A.....	G.....	A.....	A.....	.....	.....	.....	A.....	ACC.....	.....	GTG 994
Bparapertussis16S.SEQ	.....T.....	A.....	G.....	A.....	A.....	.....	.....	.....	A.....	ACC.....	.....	GTG 966
Bpertussis 16S.SEQ	.....T.....	A.....	G.....	A.....	A.....	.....	.....	.....	A.....	ACC.....	.....	GTG 992
Bcepcia 16S.SEQ	.....T.....	A.....	G.....	A.....	A.....	.....	.....	.....	A.....	ACC.....	.....	GTG 995
Bsmalli 16S.SEQ	.....T.....	A.....	G.....	A.....	A.....	.....	.....	.....	A.....	ACC.....	.....	GTG 968
Bpseudomallei 16S.SEQ	.....T.....	A.....	G.....	A.....	A.....	.....	.....	.....	A.....	ACC.....	.....	GTG 1047
Ngoncorrhoeae 16S.SEQ	.....T.....	A.....	G.....	A.....	A.....	.....	.....	.....	A.....	ACC.....	.....	GTG 1001
Nmening 16S.SEQ	.....T.....	A.....	G.....	A.....	A.....	.....	.....	.....	A.....	ACC.....	.....	GT. 1001
Paeruginosa 16S.SEQ	.....T.....	A.....	G.....	A.....	A.....	.....	.....	.....	A.....	ACC.....	.....	G.T 995
Vcholerae 16S.SEQ	.....T.....	A.....	.....	.....	N.....	.....	.....	.....	.....	.....	.....	998
Yenterocolitica 16S.SEQ	.....	.....	.....	.....	N.....	.....	.....	.....	.....	.....	.....	1000

FIG. 2A-9

Table 1. Comparison of the results of the proposed method with Weighted residue weight table.

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with weights

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Bautille16S SEQ

-TG..AA.C.T.....A.GAC-.CT---TGG...G-A.A.T.	G....T....C....
<hr/>	
.-TG..AA.C.T.....A.GAC-.CT---TGG...G-A.A.T.	G....T....C....

Banthracis16.5BQ

T-19..	CA.....T.....G.....T.....C.....G.....
Efaecalis 16S.SEQ	
.GTCTAT.C.T.....A.GAA.T.C--C.TCG..AC..G.-.T.....G.....T.....C.....G.....	
illectis 16S.SEQ	

T-TG..CAC..TG...CA..GCTT.C-.C.TCG.--G..ANA.T.....G.....C....G....
Lmonocyt16S.SEQ

Strain	Genotype	Phage
Saureus16S.SEQ	T-IG...ANC...T...A...G...C...C...C...	T...
Saureus16S.SEQ	G...T...T...C...T...A...C...T...C...C...	G...
Saureus16S.SEQ	G...T...T...C...T...A...C...T...C...C...	G...

Smu1ahis16S.SEQ	TCCTG..CGC..T.....A..G.TT.C--C.TCG..AC.GA.-T.....G.....T.....G.....C....G....
Spneumon16S.SEQ	TCCTG..CGC..T.....A..G.TT.C--C.TCG..AC.GA.-T.....G.....T.....G.....C....G....

G.TGC.GGC..T.....A..G..T..A--C..TGG..TAC...C.....C...G...
 G.TGC.GGC..T.....A..G..T..A--C..TGG..TAC...C.....C...G...
 Spyogenes16S.S2Q
 G.TGC.GGC..T.....A..G..T..A--C..TGG..TAC...C.....C...G...
 G.TGC.GGC..T.....A..G..T..A--C..TGG..TAC...C.....C...G...

Mavium16S_SEQ
.....CTGTGTC.....G.....C...
...G.-C-GGGTCT..GAT.GGC.T.C.TGT.
Mtb16S_SEQ
.....CGAGCTGTCACCTGGTTGTGAATG

16S.1
 16S.2
 16S.3
 16S.4
 16S.5
 16S.6
 16S.7
 16S.8
 16S.9
 16S.10
 16S.11
 16S.12
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 16S.14
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 16S.348
 16S.349
 16S.350

Kpneumoniae 16S.SEQ
.....G.T.....G.T.....G.T.....N.
A.....GA-ACT.....G.T.....A--.....G.T.....

ACTININOS.SEQ
A.....AGC.T.....TA.....C....G....
Hinfluenzae 16S.SEQ
AGC.AA.....C.GA.C.....C....G....

Abbrunzio, A. 1999. *La vita delle piante*. Roma: Boringhieri.

Bparapertussis18S.SEQ	TG...TC-CCGA.....TTGGCA....	TGG.AA.A....C.GA.C.	C..G.
Bpertussis 16S.SEQ			

Вспадца 16S. SEQ

Bmal1 16S SEQ
G...GC-CGGT.....C.GGCC
Bmal1 16S SEQ
G...GC-CGGT.....C.GGCC
Bmal1 16S SEQ
G...GC-CGGT.....C.GGCC

Species	TC-C	G	C	GGA	G.C.A.C	C
<i>Pyrenococcus</i>						
<i>Ngonorrhoeae</i>						

[illegible]

<i>paeruginosa</i> 16S.SEQ.....	G....TC-AG.G...C.CTGGA.....G.C.
<i>Vcholerae</i> 16S.SEQ.....	G....TC-AG.G...C.CTGGA.....G.C.

Yenterocolitica 16S.SEQG...T.-AG.....CT.A.N.....C.....

FIG. 2A-10

FIG. 2A-10

Alignment Report of Gram +8- 16S align.MEG, using Clustal method with Weighted residue weight table.
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	1120	1130	1140	1150	1160	1170	1180	1190	1200	1210	1220	1230
Bautilis16S.SEQ	AT..A.	A--T.A.TT.	C..T..T.	T..T..T.	G..C..C.	C..C..C.	A..A..A.	C..T..T.	T..T..T.	T..T..T.	T..T..T.	1232
Banthracis16.SEQ	AT..A.	T.A--TAA.TT.	C..T..T.	T..T..T.	G..C..C.	C..C..C.	A..A..A.	C..T..T.	T..T..T.	T..T..T.	T..T..T.	1235
Bfaecalis16S.SEQ	TG.A.	T.A--TAA.TT.	C..T..T.	T..T..T.	G..C..C.	C..C..C.	A..A..A.	C..T..T.	T..T..T.	T..T..T.	T..T..T.	1225
Lliactis16S.SEQ	TG.A.	T.A--TAA.TT.	C..T..T.	T..T..T.	G..C..C.	C..C..C.	A..A..A.	C..T..T.	T..T..T.	T..T..T.	T..T..T.	1242
Imonocyl16S.SEQ	ATT.A.	A--TAA.TT.	C..T..T.	T..T..T.	G..C..C.	C..C..C.	A..A..A.	C..T..T.	T..T..T.	T..T..T.	T..T..T.	1250
Saureaus16S.SEQ	AG..A.	T.A--TAA.TT.	C..T..T.	T..T..T.	G..C..C.	C..C..C.	A..A..A.	C..T..T.	T..T..T.	T..T..T.	T..T..T.	1246
Smutans16S.SEQ	TG.A.	T.A--TAA.TT.	C..T..T.	T..T..T.	G..C..C.	C..C..C.	A..A..A.	C..T..T.	T..T..T.	T..T..T.	T..T..T.	1243
Spneumon16S.SEQ	TG.A.	T.A--TAA.TT.	C..T..T.	T..T..T.	G..C..C.	C..C..C.	A..A..A.	C..T..T.	T..T..T.	T..T..T.	T..T..T.	1230
Spvogensis16S.SEQ	TG.A.	T.A--TAA.TT.	C..T..T.	T..T..T.	G..C..C.	C..C..C.	A..A..A.	C..T..T.	T..T..T.	T..T..T.	T..T..T.	1138
Navium16S.SEQ	..TCA.	..G..AAT.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	1186
Mtd16S.SEQ	..TCA.	..AC..AAT.GT.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	..G..GTCA.	1227
Ec coli 0157 16S.SEQ	TCCTTTTTCGCGG--GTCCGCGCGCGGACTCAAGAGAGACTCCAGTGAATAACTGAGGAAGTGGGAGTGAAGTCAATGAGGCGCTACACAGTCTCA	1236										
Xpneumon1ae 16S.SEQ	.....G.	.....AAT.	.....T.	.....G.	.....G.	.....C.	.....C.	.....GT.	.....GT.	.....GT.	.....GT.	1232
Aactino16S.SEQ	.....-ACTT.	.....T.	.....T.	.....T.	.....G.	.....C.	.....C.	.....N.	.....GT.	.....GT.	.....GT.	1234
Hinfluenzae 16S.SEQ	.....A.A.	.....T.	.....AAA.C.	.....T..T.	.....G..C..C.	.....C..C..C.	.....C..C..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1226
BbronchiSeptica 16S.SEQ	.....A.A.	.....T.	.....AAA.C.	.....T..T.	.....G..T.C..C.	.....C..T.C..C.	.....C..T.C..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1198
Bparaptusis16S.SEQ	.....A.A.	.....T.	.....AAA.C.	.....T..T.	.....G..C..C.	.....C..C..C.	.....G..C..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1224
Bptertus16S.SEQ	.....A.	.....T.	.....CAA.A.C.	.....T..T.	.....G..C..C.	.....C..C..C.	.....C..C..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1227
Bcepacia 16S.SEQ	.....A.	.....T.	.....CAA.A.C.	.....T..T.	.....G..C..C.	.....C..C..C.	.....C..C..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1200
Bmal16S.SEQ	.....A.	.....T.	.....CAA.A.C.	.....T..T.	.....G..C..C.	.....C..C..C.	.....C..C..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1279
Bpseudomallei 16S.SEQ	.....A.	.....T.	.....CAA.A.C.	.....T..T.	.....G..C..C.	.....C..C..C.	.....C..C..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1279
Ngonorrhoeae 16S.SEQ	.....A.A.	.....T.A--T..TT.	C..T..T.	.....T..T.	.....G..C..C.	.....C..G..C.	.....C..G..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1236
Nmening 16S.SEQ	.....A.A.	.....T.A--T.A.TT.	C..T..T.	.....T..T.	.....G..C..C.	.....C..G..C.	.....C..G..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1236
Paaruginosa 16S.SEQ	.....A.A.	.....AC-CT..GT.	C..T..T.	.....T..T.	.....G..C..C.	.....C..C..C.	.....C..C..C.	.....T..GT.	.....T..GT.	.....T..GT.	.....T..GT.	1231
Vcholeraz 16S.SEQ	.....GT.	.....AC..AAT.GT.	.....C.G.	.....G.	.....G.	.....C.	.....C.	.....GT.	.....GT.	.....GT.	.....GT.	1235
Yenterocolitica 16S.SEQ	.....Yenterocolitica 16S.SEQ	.....AC..AAT.GT.	.....C.G.	.....G.	.....G.	.....C.	.....C.	.....GT.	.....GT.	.....GT.	.....GT.	1237

FIG. 2A-11

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
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FIG. 2A-12

FIG. 2A-12

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Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
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	1360	1370	1380	1390	1400	1410	1420	1430	1440	1450	1460	1470
Bautilis16S.SEQ	C....G					C.A...	TT.AA.CCC					1427
Banthracis16.SEQ	C....G					C.A...	TT.AA.CCC	C...G.GG....	C...G.GG....	TTTG.AGCCA..	COC.T.AGG.	1472
Efaecalis16S.SEQ	C.-C..G					C.A...	TT.AA.CCC	C...GAGG....	C...GAGG....	TTTG.AGCC		1449
Llactis16S.SEQ	C.-C..G					C...	T.GA.T.CCC	T...C...G	T...C...G	CC--AAG.AG	C.T.AGG.	1478
Lmonocyt16S.SEQ	C....G					C.A...	TT.AA.CCC	C...G	C...G	TTTG.AGCCA..	COC.G.AGG.	1487
Saureus16S.SEQ	C....T					C.A...	TT.AA.CCC	C...G.AG	C...G.AG	TTTAG.AGCTA..	COT.G.AGG.	1483
Smutans16S.SEQ	C.-C..G					C.A...	TT.AA.CCC	C...GAGG....	C...GAGG....	TTAG.GCCAA..	COC.T.AGG.	1481
Spneumon16S.SEQ	C.-C..G					C.A...	TT.AA.CCC	C...GAGG....	C...GAGG....	G.--AAG.AGCCA..	COC.T.AGG.	1466
Spvogenes16S.SEQ	C.-C..G					C.A...	TT.AA.CCC					1335
Mavium16S.SEQ	C.-C..G					GT...	AA.C.AA.CCC	CCA..G.C.C...	C.TTT.G.AG..A.	GT.G.AGG.		1426
Mtbl6S.SEQ	C.MC.TG					GT...	AA.C.AA.CCC	CCA..G.C.C...	C.--G.AG..A.	GT.G.AGG.		1464
Ecoli o157 16S.SEQ	CATCGAA..TGCCAGGCTGAATPACGTTCCTGGGCGCTGTATACACCGCCGTCTACCCATCGGCTGGGTGCANAGAGTAGCTAGCTTAACCTTCGGAG--GGCGCTTACCACTTT											1472
Kpneumoniae 16S.SEQ	A....-T					T.CC...	G.A..G..GAGA.GT--	T...T...	T...T...			1468
Aactinol6S.SEQ	A....-TTG					T.CC...	A....TT...	T...T...	T...T...			1470
Hinfluenzae 16S.SEQ	A....-T.G					TT.CC...	T...C...GCCAA..G.GG--	A....A....	A....A....			1462
Bbronchiseptica 16S.SEQ	C.-T.G					TT.CC...	T...C...GCCAA..G.GG--	A....A....	A....A....			1436
Bparaptusis16S.SEQ	C.-T.G					TT.CC...	T...C...GCCAA..G.GG--	A....A....	A....A....			1460
Bpertusis 16S.SEQ	C.-T.G					TT.CC...	T...C...GCCAA..G-A..G.C...	GG.	GG.			1463
Bcepscia 16S.SEQ	C....G					TT.CC...	G.C.TC..GCCAA..G-A..G.C...	GG.	GG.			1436
Bmailei 16S.SEQ	C....G					TT.CC...	G.C.TC..GCCAA..G-A..G.C...	GG.	GG.			1515
Bpseudomallei 16S.SEQ	C....G					TT.CC...	G.C.TC..GCCAA..G-A..G.C...	GG.	GG.			1472
Bngonorrhoeae 16S.SEQ	C.-A.TG					GGAT.CC...	GGAT.CC...	GA..ACAA..TC--	GG.	GG.		1472
Bnening 16S.SEQ	C.-A.TG					GGAT.CC...	GGAT.CC...	GA..ACAA..TC--	GG.	GG.		1467
Bpaeruginosa 16S.SEQ	A....-T					TCC...	C...C.N..T...	N.....G.	N.....G.			1466
Bcholerae 16S.SEQ	A....-TTG					TCC...	C...C.N..T...	N.....G.	N.....G.			1473
Bveterocollitica 16S.SEQ	A....-T					TCC...	C...C.N..T...	N.....G.	N.....G.			1473

FIG. 2A-13

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
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	1480	1490	1500	1510	1520	1530	1540
Beutellia16S.SEQ							1427
Banthracis16.SEQ							1544
Bfaecalis 16S.SEQ							1449
Llaactis 16S.SEQ							1548
Laonocy16S.SEQ							1524
Saureus16S.SEQ							1555
Smutans16S.SEQ							1551
Spneumon16S.SEQ							1515
Spyrogenes16S.SEQ							1335
Mavium16S.SEQ							1465
Mtbl6S.SEQ							1536
Ecoli o157 16S.SEQ							1542
Kpneumonlae 16S.SEQ							1534
Actino16S.SEQ							1485
Hinfluenzae 16S.SEQ							1487
Bronchiseptica 16S.SEQ							1532
Bparaptussis16S.SEQ							1485
Bpartussis 16S.SEQ							1464
Bcepacia 16S.SEQ							1535
Bmallei 16S.SEQ							1488
Spseudomallei 16S.SEQ							1610
Ngonorrhoeae 16S.SEQ							1544
Nmening 16S.SEQ							1544
Paeruginosa 16S.SEQ							1537
Vcholeraz 16S.SEQ							1467
Venterocolitica 16S.SEQ							1485

```

Decoration 'Decoration #1': Hide (as '.') residues that match Ecoli 0157 16S.SEQ exactly.

```

FIG. 2A-14

100221 16662001

Alignment Report of Gram +8- 23S align.MEG, using Clustal method with Weighted residue weight table.

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	10	20	30	40	50	60	70	80	90	100	110
Baebilis 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Banthracis 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Elacalis 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Liactis 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Imonocytogenes 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Saureus 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Smutans 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Spneumonias 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Spyrogenes 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Mavium 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Mtuberculosis 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Ecoli 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Kpneumonias 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Hinfluenzae 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bbrochiseptica 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bparapartusis 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bpertussis 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bcepacia 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bmailei 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bpseudomallei 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bngonorrhoeae 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bnemigitidis 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bperuginosa 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Bcholerae 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.
Benterocolitica 23S.SEQ	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.	TT.GA..G.CG.

FIG. 2B-1

TOO22T 46E6200T

Alignment Report of Gram +8- 23S align.MEG, using Clustal method with Weighted residue weight table.
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	120	130	140	150	160	170	180	190	200	210	220
Esutillis 23S.SEQ
Banthracis 23S.SEQ
Brachella 23S.SEQ
Llactis 23S.SEQ
Leuocytogenes 23S.SEQ
Saureus 23S.SEQ
Smutans 23S.SEQ
Spneumonise 23S.SEQ
Spyoogenes 23S.SEQ
Maviium 23S.SEQ
Mtuberculosis 23S.SEQ
Ecoli 23S.SEQ
Kpneumonise 23S.SEQ
Hinfluenzae 23S.SEQ
Bbrochiseptica 23S.SEQ
Bperapartusis 23S.SEQ
Bpertussis 23S.SEQ
Bcepacia 23S.SEQ
Bmailei 23S.SEQ
Bpseudomallei 23S.SEQ
Ngonorrhoeae 23S.SEQ
Neminigitidis 23S.SEQ
Paeruginosa 23S.SEQ
Vcholerae 23S.SEQ
Yenterocolitica 23S.SEQ

FIG. 2B-2

100221" 2556200T

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

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	230	240	250	260	270	280
Bautilis 23S.SEQ	T.C.....TGGGA.C-AC..GA-TCAGGOCAAACCAG..TTGGCT.T..TGGTTGTAGGACC..T..AC
Banthracis 23S.SEQ	T.C.....T.TG	.....AC..AACA	.....GGOCA	.....AACC	.....AG..TTGGCT.T..TGGTTGTAGGAC	.....T..TA.AC
Efacelis 23S.SEQ	TTT.....TG	.....AC..GA-AGA	.....GGOCA	.....AACC	.....CA..TTGCTTT.T..GGOCTGTAGGAC	.....TC..A.A.
Lactis 23S.SEQ	ATC.....T.GTA	.....C.AA-GAA	.....GGOCA	.....AACC	.....A..TTGCTT.T..GGOCTGTAGGAC	.....C..TA.AC
Lmonocytogenes 23S.SEQ	ATC.....T.GTA	.....AC..AA-AGA	.....GGOCA	.....AACC	.....CA..TTGCTTT.T..GGOCTGTAGGAC	.....C..TA.AC
Saureus 23S.SEQ	TTT.....TT	.....AC..GA-AGA	.....GGOCA	.....AACC	.....GA..T.TTT.C.CT..GGOCTGTAGGAC	.....C..TA.AC
Smutans 23S.SEQ	A.C.....G..T	.....AC..CA-GAA	.....GGOCA	.....AACC	.....A..TTT.CTCTTC.GGOCTGTAGGAC	.....C..TA.AC
Spneumonias 23S.SEQ	A.C.....G..T	.....AC..CA-GAA	.....GGOCA	.....AACC	.....TTT.CTC.TC.GGOCTGTAGGAC	.....C..TA.AC
Spvogenes 23S.SEQ	.C.....G..T	.....AC..CA-GAA	.....GGOCA	.....AACC	.....TTT.CTC.TC.GGOCTGTAGGAC	.....C..TA.AC
Mavium 23S.SEQ	T.T.....GT	.....C-C..AACAGCTAAACGCTATGACACAC..GCT	.....GCT	.....G..TTGT.T.TGC.GGOCTGTAGGAC	.....GATATGTC	.....C.CTACCGGCTG
Mtuberculosis 23S.SEQ	T.T.....G.A	.....C-C..AACAGCTAAACGCTATGACACAC..GCT	.....GCT	.....G..TTGT.T.TGC.GGOCTGTAGGAC	.....GATATGTC	.....C.CTACCGGCTG
Ecoli 23S.SEQ	CGAGTTCCTCCAGTACGCGGCGGCGAA-CGGG	.....C	.....T	.....C	.....AGGAGCGGCGGCGGCTG	.....A-ATCAGTGT
Kneumonias 23S.SEQ	.....T.GT	.....A.C	.....A	.....AGT.AGTGA	.....T	.....G..A.A.
Hinfluenzae 23S.SEQ	.....GAA	.....T	.....ATC	.....T.TT..C	.....T.T.CA	.....T.T.CA
Bbrochiseptica 23S.SEQ	.....GAA	.....T	.....ATC	.....T.TT..C	.....T.T.CA	.....T.T.CA
Bparapertussis 23S.SEQ	.....GAA	.....T	.....ATC	.....T.TT..C	.....T.T.CA	.....T.T.CA
Bpertussis 23S.SEQ	.....GAA	.....T	.....ATC	.....T.TT..C	.....T.T.CA	.....T.T.CA
Bcapacia 23S.SEQ	.....AA	.....T	.....AT	.....T.TT.CA.TC	.....T	.....T.ATT
Bmallei 23S.SEQ	.....AA	.....T	.....AT	.....T.TT.CA.TC	.....T	.....T.ATT
Bpseudomallei 23S.SEQ	.....AA	.....T	.....AT	.....T.TT.CA.TC	.....T	.....T.ATT
Ngonorrhoeae 23S.SEQ	.....G.A	.....T	.....C	.....T.TA.G	.....A.C	.....A.C
Neminigitidis 23S.SEQ	.....G.A	.....T	.....C	.....T.TA.G	.....A.C	.....A.C
Paaruginosa 23S.SEQ	.....TT	.....T	.....C	.....T.TT.AG	.....T..T	.....T..T
Vcholerae 23S.SEQGCTTCT.TT.AGC..GC..G
Yenterocolitica 23S.SEQGCTTCT.TT.AGC..GC..G

FIG. 2B-3

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FIG. 2B-4

FIG. 2B-4

[illegible]

Alignment Report of Gram +& 23S align.MEG, using Clustal method with Weighted residue weight table.
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	380	390	400	410	420	430	440	450	460	470	480	490
Beubilis 23S.SEQ	A.....AA..T.C..G..CC..A.....TC.....CT.G.....T.....C.....A.....											544
Banthracis 23S.SEQ	A.....AA..T.C..G..C..A.....TC.....CT.G..T.....T.....C.....A.....											545
Efacelis 23S.SEQ	A.....AA..T.C..G..CC.C.....CG.....CT.G.....T.....C.....A.....											537
Llactis 23S.SEQ	.....C.AA.....A..T.....CC..A.....TC.....T.G.....T.....C.....A.....											532
Leamonocytogenes 23S.SEQ	A.....AA..T.C..G..CC..A.....TC.T.....CT.G.....T.....C.....A.....											544
Saureus 23S.SEQ	AG.....AA..T.C..G..C..A.....TC.T.....CT.G.....T.....C.....A.....											544
Smutans 23S.SEQ	.....A..A.....C..G..C..A.....TC..CC.....CT.G.....T.....C.....A.....											529
Spneumoniae 23S.SEQ	.....AA..C..G..C..A.....TC..CC.....CT.G.....T.....C.....A.....											530
Smutans 23S.SEQ	.....AA..C..G..C..A.....TC..CC.....CT.G.....T.....C.....A.....											531
Spynogenes 23S.SEQ	A.....C.AA..TC..G..C..A.....TC.....CT.G.....T.....C.....A.....											593
Mavium 23S.SEQ	.....G.C.....A..TC.G..C..C..A.....TC.G.TT.....C.G.TT.....T.....											587
Mtuberculosis 23S.SEQ	.....G.C.....A.....CG.G.....CC.CC.....C..GGT..C.....CGA.....T.....T.....											587
Ecoli 23S.SEQ	CGACAGCTGGTATCTCTGCAATATGGGGGACATCTCTCCAGGCTAAATCTCTGTCGACGATGATGACAGTACCTGAGGGAAGGCGAAGAGAACCCCGCGAGCGGAGT											499
Kpneumoniae 23S.SEQ	.....A.....T.....G.A.....C.....T.....A.....T.....											505
Hinfluenzae 23S.SEQ	.....AA.....T.....G.....G.....TC.....T.....A.....											492
Bbrchiseptica 23S.SEQ	.....AA.....T.....G.....G.....TC.....T.....A.....											492
Bparapertussis 23S.SEQ	.....AA.....T.....G.....G.....TC.....T.....A.....											492
Bpertussis 23S.SEQ	.....AA.....T.....G.....G.....TC.....T.....A.....											497
Bcepacia 23S.SEQ	.....AA.....T.....G.....G.....TC.....T.....A.....											497
Enallei 23S.SEQ	.....AA.....T.....G.....G.....TC.....T.....A.....											497
Bpseudomallei 23S.SEQ	.....AA.....T.....G.....G.....TC.....T.....A.....											500
Ngonorrhoeae 23S.SEQ	.....AA.....T.....G.....G.....TC.....T.....A.....											499
Neminigitidis 23S.SEQ	.....AA.....T.....G.....G.....TC.....T.....A.....											499
Paeruginosa 23S.SEQ	AG.....A.AA.CTT.....C.....A.....T.....T.....											487
Vcholerae 23S.SEQ	.....A.....T.....G.....G.....TC.....T.....A.....											499
Venterocolitica 23S.SEQ	.....AC.....T.....G.....G.....TC.....T.....A.....											499

FIG. 2B-5

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
November 27, 2001 4:14 PM

FIG. 2B-6

100221" 26E6200T

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

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	10	20	30	40	50	60	70	80	90
Escherichia 23S.SEQ	G.A.	G.T.C.	C.C.	G.	G.TA	CAT	G.ACT	TCG	TC 742
Bacteroides 23S.SEQ	G.T.	G.C.	C.C.	G.	G.TA	T	T.ACT	TCG	TC 743
Escherichia 23S.SEQ	GT	G.AC	C.C.	G.	G.TA	AA	G.ATGA	TCG	TC 731
Lactis 23S.SEQ	GTT	G.AC	T	G.TA	CAT	T	AT	T.A.G.	TC 743
Imonocytogenes 23S.SEQ	G.A.	A.A.C.	T.C.	G.	G.TA	T	ATT	TCG	TC 742
Saureus 23S.SEQ	G.A.	A.A.T.	T.C.	G.	G.TA	T	AA	TCG	TC 728
Smuts 23S.SEQ	GTT	G.AC	T	G.TA	CCT	T	AT	T.A.C.G.	TC 730
Spneumonias 23S.SEQ	GTT	G.AC	T	G.TA	C	T	AT	T.T.G.	TC 806
Mavium 23S.SEQ	C	TCG	T	C.C.	G.	T	G	TC.C.G.	TC 826
Neuberculis 23S.SEQ	C	TCG	T	C.C.	G.	T	G	TC.C.G.	TC 697
Ecoli 23S.SEQ	GTAA	CGATAG	CGAGCG	GAACCG	GTCTAACCGGGGTTA	AGTTCAGG	GTATAG	CGCGGAAACCGCGGTATCTAGCCATGCG	TC 695
Kpneumonias 23S.SEQ	T	C	T	T	T	T	A	T	TC 703
Hinfluenzae 23S.SEQ	T	T	T	T	T	T	A	T	TC 687
Abrochiseptica 23S.SEQ	T	T	T	T	T	T	A	T	TC 688
Bparapertussis 23S.SEQ	T	T	T	T	T	T	A	T	TC 688
Bparapertussis 23S.SEQ	T	T	T	T	T	T	A	T	TC 691
Bcepacia 23S.SEQ	T	T	T	T	T	T	A	T	TC 693
Bmallei 23S.SEQ	T	T	T	T	T	T	A	T	TC 693
Bpseudomallei 23S.SEQ	T	T	T	T	T	T	A	T	TC 697
Ngonorrhoeae 23S.SEQ	T	T	T	T	T	T	A	T	TC 696
Neminigitidis 23S.SEQ	T	T	T	T	T	T	A	T	TC 687
Paeruginosa 23S.SEQ	T	T	T	T	T	T	A	T	TC 684
Vcholeracae 23S.SEQ	T	T	T	T	T	T	A	T	TC 696
Yenterocolitica 23S.SEQ	T	T	T	T	T	T	A	T	TC 696

FIG. 2B-7

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
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[illegible]

FIG. 2B-8

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

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	820	830	840	850	860	870	880	890	900	910	920	930			
Esutillis 23S.SEQ	TAAC	GCTA	AA-GT-A-G	GTCTT	A	CCTCA	GG	G.AAT.C	---A 976	
Banthracis 23S.SEQ	TAAC	.....	CTA	.....	TAA-TGTAG	GTCTT	A	.....	CTCAT	.....	GA	.....	G.AAT.C	---A 978
Efaelis 23S.SEQ	TAAC	.....	CTA	.....	G-AATGAG	ATGAT	A	.....	CTA	.....	C.C	.....	G.AAT.C	---A 971
Llactis 23S.SEQ	TAAC	.....	CTA	.....	G	AAATGATGAT	A	.....	CTA	.....	CG	.....	G.AAT.C	---A 978
Lnococytogenes 23S.SEQ	TAAC	.....	CTA	.....	A-GT-AAG	GTCTT	A	.....	CTA	.....	C.CT	.....	G.AAT.C	---A 976
Saureus 23S.SEQ	TAAC	.....	CTA	.....	AA-TG-A-G	TATTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 963
Smutans 23S.SEQ	TAAC	CTA	G	GTCC-GAG	CTCTT	A	CTA	C	G.AAT.C	---A 965
Spneumonise 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
SPyogenes 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Mavium 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Mtuberculosis 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Ecoli 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Kneumonise 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Hinfluenzae 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Bbrochiseptica 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Bparapertusis 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Bpertusis 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Bcepacia 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Bmailei 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Bpseudomallei 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Ngonorhoeae 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Neminigitidis 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Paeruginosa 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Vcholerazae 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961
Yenterocolitica 23S.SEQ	TAAC	.....	CTA	.....	G	AT-TT-AGTCTTT	A	.....	CTA	.....	C	.....	G.AAT.C	---A 961

FIG. 2B-9

using Clustal method with Weighted residue weight table.

[illegible]

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
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	1060	1070	1080	1090	1100	1110	1120	1130	1140	1150	1160
Baebtilis 23S.SEQ	A.....	C.....	GT.....	GT.....			GACT.....	C.A.....	C.....	A.G.AT.....	-ACTG 1211
Banthracis 23S.SEQ	A.T.....	C.....	GT.....	GT.....			GACT.....	C.A.....	C.....	AT.CAC.....	-ATTG 1213
Efacaelis 23S.SEQ	A.T.....	C.....	GT.....	GT.....			GAC.....	C.A.....	C.....	A.ATT.....	T.-ACTA 1206
Llactis 23S.SEQ	A.T.....	A.C.....	T.....	C.....	GT.....		A.....	C.A.....	C.....	A.ATT.....	TT.-ATTG 1201
Laonocytogenes 23S.SEQ	A.....	C.....	G.....	GT.....			GAC.....	C.A.....	C.....	A.ATT.....	A.T.-AT.A 1213
Saureus 23S.SEQ	A.T.....	-	GT.....	GT.....			GACA.....	C.A.....	C.....	A.ATT.....	T.-ATTG 1211
Smutans 23S.SEQ	A.T.....	A.....	T.T.....	C.....	GT.....		GAC.....	C.A.....	C.....	G.A.ATT.....	T.-ATC 1200
Spnemoniae 23S.SEQ	A.T.....	A.....	T.T.....	C.....	GT.....		GAC.....	C.A.....	C.....	A.ATT.....	T.-ATA 1202
Spynogenes 23S.SEQ	A.T.....	A.....	T.T.....	C.....	GT.....		GAC.....	C.A.....	C.....	A.GTTT.....	T.-AT.A 1202
Mayium 23S.SEQ	A.....	G.....	C.....	G.....	GT.....		A.GATTA.....	C.TA.....	G.....	C.G.CAC.G.....	C.....
Mtuberculois 23S.SEQ	A.....	G.....	CC.....	G.....	GT.....		A.....	GATTG.....	C.....	C.G.CAC.G.....	C.....
Ecoldi 23S.SEQ	CCGCGATGCTGAGACGCCAT	CAATTAAGACAGCTAATAGCT	CACCTGCTGAGTGCCTGCGCGAGATGTAA	CGCGGCTTAACAT	GCACCGAGCTGG-CACG	1167					1165
Kneumoniae 23S.SEQ	T.....	-	-	-	A.....				G.AT.A.....		T. 1173
Hinfluenzae 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		G.G.A-A.....		GT.T 1153
Bbrochiseptica 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		G.G.A-A.....		GT.T 1154
Bparapercuris 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		G.G.A-A.....		GT.T 1154
Bpartussis 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		G.T.ATA.....		AT. 1160
Bcepacia 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		G.ATA.....		AT. 1162
Bmalei 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		G.ATA.....		AT. 1162
Bpseudomallei 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		G.ATA.....		AT. 1169
Bgonorrhoeae 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		C.ATC.ATA.....		AT. 1168
Bneminigitidis 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		C.A.CACA.....		AT. 1156
Bpaeruginosa 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		C.A.CACA.....		AT. 1152
Bcholeraz 23S.SEQ	T.....	G.....	C.....	C.....	A.....		T.....		G.ATA.....		AT. 1166

FIG. 2B-11

• **accelerated MEG** using Clustal method with Weighted residue weight table.

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[illegible]

FIG. 2B-12

using Clustal method with Weighted residue weight table.

	1290	1300	1310	1320	1330	1340	1350	1360	1370	1380	1390	1400	1410	1420	1430	1440	1450	1460	1470	1480	1490	1500	1510	1520	1530	1540	1550	1560	1570	1580	1590	1600	1610	1620	1630	1640	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250	2260	2270	2280	2290	2300	2310	2320	2330	2340	2350	2360	2370	2380	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	2600	2610	2620	2630	2640	2650	2660	2670	2680	2690	2700	2710	2720	2730	2740	2750	2760	2770	2780	2790	2800	2810	2820	2830	2840	2850	2860	2870	2880	2890	2900	2910	2920	2930	2940	2950	2960	2970	2980	2990	3000	3010	3020	3030	3040	3050	3060	3070	3080	3090	3100	3110	3120	3130	3140	3150	3160	3170	3180	3190	3200	3210	3220	3230	3240	3250	3260	3270	3280	3290	3300	3310	3320	3330	3340	3350	3360	3370	3380	3390	3400	3410	3420	3430	3440	3450	3460	3470	3480	3490	3500	3510	3520	3530	3540	3550	3560	3570	3580	3590	3600	3610	3620	3630	3640	3650	3660	3670	3680	3690	3700	3710	3720	3730	3740	3750	3760	3770	3780	3790	3800	3810	3820	3830	3840	3850	3860	3870	3880	3890	3900	3910	3920	3930	3940	3950	3960	3970	3980	3990	4000	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120	4130	4140	4150	4160	4170	4180	4190	4200	4210	4220	4230	4240	4250	4260	4270	4280	4290	4300	4310	4320	4330	4340	4350	4360	4370	4380	4390	4400	4410	4420	4430	4440	4450	4460	4470	4480	4490	4500	4510	4520	4530	4540	4550	4560	4570	4580	4590	4600	4610	4620	4630	4640	4650	4660	4670	4680	4690	4700	4710	4720	4730	4740	4750	4760	4770	4780	4790	4800	4810	4820	4830	4840	4850	4860	4870	4880	4890	4900	4910	4920	4930	4940	4950	4960	4970	4980	4990	5000	5010	5020	5030	5040	5050	5060	5070	5080	5090	5100	5110	5120	5130	5140	5150	5160	5170	5180	5190	5200	5210	5220	5230	5240	5250	5260	5270	5280	5290	5300	5310	5320	5330	5340	5350	5360	5370	5380	5390	5400	5410	5420	5430	5440	5450	5460	5470	5480	5490	5500	5510	5520	5530	5540	5550	5560	5570	5580	5590	5600	5610	5620	5630	5640	5650	5660	5670	5680	5690	5700	5710	5720	5730	5740	5750	5760	5770	5780	5790	5800	5810	5
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FIG. 2B-13

[illegible]

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

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[illegible]

FIG. 2B-14

FOO22T" 26E6200T

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

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	1490	1500	1510	1520	1530	
Bubthills 23S.SEQ	T.GGAAT	TTTC	CC	A	G.C	CT
Banthracis 23S.SEQ	T.A.AAGT	CTTA	TCG	G	CT	CT
Efaealis 23S.SEQ	TTGAG.AG	TT	G.T.TT.C	TCT	T	ACA
Llactis 23S.SEQ	TTGAGATG.T	G.A.TTTC	TCT	T	CAT	CT
Imonocytogenes 23S.SEQ	TTGAGATG.T	CTTC	TC	CG	CA	CT
Saureus 23S.SEQ	T.AG.ATT	GT.C	TCG	T	CT	CT
Smitans 23S.SEQ	AGGACTG.T	G.T.T.GT	TCGT	CCCA	CA	CT
Spneumonias 23S.SEQ	TGAA.TG	G.T.T	TTAT	CAT	CT	CT
Spvogenes 23S.SEQ	TAGATG.T	G.T.T.TC	TTAT	CAT	CT	CT
Mavium 23S.SEQ	ATGCGGTG.C	GG	GG.A.CCGTACCATC	GTGGT	TA	G
Mtuberculosis 23S.SEQ	AAGCGGTG.C	GG	GGTA.CCGTACCATC	GTGGT	CA	G
Ecoli 23S.SEQ	GGTTTTCAGGCA	ATCCGGA	ATC	AGGCTGAGCGTG	ATGACGAGGCACTAC	G
Kpneumonias 23S.SEQ	...G	T	T	T	T	T
Hinfluenzae 23S.SEQ	...AAG.TT	C.T	TCG	T	CA	A
Bbrochiseptica 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Bparapertussis 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Bpertussis 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Bcepacia 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Bmallei 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Bpseudomallei 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Bgonorrhoeae 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Bneminigitidis 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Bpaeruginosa 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Bcholerae 23S.SEQ	...GGG	GG	GA	G	AT	ANG
Benterocolitica 23S.SEQ	...GGG	GG	GA	G	AT	ANG

FIG. 2B-15

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
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	1540	1550	1560	1570	1580	1590	1600	1610	1620	
Bautilis 23S.SEQ	AGC...TTC.TG.T.T.ACA.G.A				GGG----	G.G.GGTGCC	G	T	A.G.-GA.G	C.T...T.A.C.
Banthracis 23S.SEQ	AGC...TCVTG.T.C.G.A			T	GGG----	A.A.GGTGCT	G		A.G.-GA.G	C.T...T.TOC
Efacalis 23S.SEQ	AGC...TTC.TG.T.ACA.G.A			T	GTG----	AA.A.TGGC	GT		A.-GA.G	T.C.T...T.AGC
Lactis 23S.SEQ	TGC...CTCT.TG.T.ACA.G.A			T	GGTAA	TC.TA-.T.CC	G		A.-GA.G	T.C.TC...T.A.C
Lmonocytogenes 23S.SEQ	ATC.TG.TT.AA.GT.A					AGT.GTA.TGCC	G		A.A.TGA.G	T.T...T.AGC
Saureus 23S.SEQ	CT.CG.TCGTG.TT.ACA.G.A				GAT----	AA.T.GGTGCC	G		A.-A.AT	T.T...T.AGC
Smitans 23S.SEQ	AGC...TT.GTG.T.ACT.G.A			T	GGT.A.T.A.TAC	T.CC	G		A.-GA.G	T.C.TC...T.A.C
Spremonas 23S.SEQ	AGC...TT.GTG.C.T.ACA.G.A			T	GGT.T.AAC.TAC	T.CC	G		A.-GA.G	T.C.TC...T.A.C
Spyogenes 23S.SEQ	AGC...TT.GTG.T.ACA.G.A			T	GGT.T.ANG.TAC	T.CC	G		A.-GA.G	T.C.TC...T.A.C
Mavium 23S.SEQ	GC...TTGGTG.C.T.G.A				GGG.G	-C.CACA.GGCC	A			TAC...T.A 1871
Mtuberculosis 23S.SEQ	GC...TTGGTG.C.T.G.A				GGG.G	-C.CACA.GGCC				TAC...T.A 1893
Ecoli 23S.SEQ	CTGTGACACAAATGCTCTCTCCAGAAAGAGCTCTACAGATCAGTATACATATCTACCCCAACGACACAGTGTCTCAGGTAGAGATACCAAGAGGATCTGAGAGATCTC									T...T. 1655
Kneumonias 23S.SEQ	...T...T									T...T. 1664
Hinfluenzae 23S.SEQ	...T.TG.A.A.ACA			A		GAA	CTTT.CT.C	TGA		GA.G.AT.AT.TC. 1639
Bhrochiseptica 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		GA.G.AT.AT.T. 1640
Sparpertussis 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		GA.G.AT.AT.T. 1643
Bpertsus 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		G-GA.AT.T.T.T. 1646
Bcepacia 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		G-GA.AT.T.T.T. 1646
Bmaliei 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		G-GA.AT.T.T.T. 1658
Bpseudonallei 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		G-GA.AT.T.T.T. 1657
Ngonorrhoeae 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		G-GA.AT.T.T.T. 1657
Neminigitidis 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		G-GA.AT.T.T.T. 1648
paeruginosa 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		G-GA.AT.T.T.T. 1648
Vcholeracae 23S.SEQ	...TG.TTGA--G.G			A		T	CTGT.CG.G.C	G		G-GA.AT.T.T.T. 1660

FIG. 2B-16

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
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[illegible]

FIG. 2B-17

100221" 46E6200T

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
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	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Baebtrilis 23S.SEQ	..GC	..GT	..C	..G	..GC	..T	..GC	..A	..G	..GC	..T	..C	..G	..OC	..T	..1921																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Banthracis 23S.SEQ	..GC	..T	..C	..G	..GC	..T	..GC	..A	..G	..G	..A	..T	..C	..G	..GA	..CT	..1917																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Efacellis 23S.SEQ	..C	..GT	..C	..AT	..T	..AT	..A	..G	..GC	..T	..C	..TTCG	..C	..G	..A	..T	..1907																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Ilactis 23S.SEQ	..C	..T	..C	..T	..AC	..C	..GT	..T	..G	..G	..GA	..T	..C	..T	..C	..G	..A	..T	..1927																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Laonocytogenes 23S.SEQ	..GC	..GT	..C	..AC	..T	..GT	..T	..G	..GC	..T	..G	..AT	..T	..C	..TTCG	..C	..G	..A	..T	..1921																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Saureus 23S.SEQ	..C	..GT	..C	..T	..AC	..T	..GT	..T	..G	..GC	..T	..G	..GA	..C	..C	..T	..G	..G	..GA	..T	..1894																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Smutans 23S.SEQ	..C	..T	..C	..G	..AT	..T	..AT	..T	..G	..G	..T	..GA	..T	..C	..T	..C	..G	..A	..GA	..T	..1896																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Spneumonae 23S.SEQ	..C	..T	..C	..T	..AT	..T	..AT	..T	..G	..G	..T	..GA	..T	..C	..C	..T	..C	..A	..GA	..T	..1897																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Spvogenes 23S.SEQ	..C	..T	..C	..T	..AT	..T	..AT	..T	..G	..G	..T	..GA	..T	..C	..T	..C	..T	..G	..GA	..T	..2110																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Navium 23S.SEQ	..C	..GT	..C	..G	..GT	..C	..AC	..T	..AC	..T	..GA	..G	..AT	..T	..C	..T	..G	..G	..GA	..T	..2132																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Mtuberculosis 23S.SEQ	..C	..GT	..C	..G	..GT	..C	..AC	..T	..AC	..T	..GA	..G	..AT	..T	..C	..T	..G	..G	..GA	..T	..2132																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Ecoli 23S.SEQ	TATTAAACACACACACTGCGAACACGACGATGACGTGTGACGCTCCCGGTCCCGAGGTATTATGTAGGGGTGACG--GCAGCG--GACGCTCTGTGATCGAGGCC	1893																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																</

FIG. 2B-18

100221 26662001

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010
Bautilis 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Banthracis 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Efacellia 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Llactis 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Laonocytogenes 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Saureus 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Smutans 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Spneumonae 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Spvogenes 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Navium 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Mtuberculosis 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Ecoli 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Kpneumonae 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Hinfluenzae 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Bbrochiseptica 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Bparapertussis 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Bpertussis 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Bcepacia 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Bnallei 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Bpseudomallei 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Xgonorrhoeae 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Neminigitidis 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Paeruginosa 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Vcholerae 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Yenterocolitica 23S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....

FIG. 2B-19

100221 666200

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
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	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120	2130
Beutellia 23S.SEQ	..AT.G.AC	..GT	..A.G	..G.G	..G.G	..G.C	..T.T	..TG	..GTA.AGCT	..AC	..A..C	..G.. 2161
Banthracis 23S.SEQ	..AT.G.AC	..GT	..A.G	..G.G	..G.G	..G.C	..T.T	..TG	..GTA.AGCT	..AC	..A..C	..G.. 2157
Efacaalis 23S.SEQ	..TT.G.AC	..GT	..A.G	..A.G.G	..A.G.G	..G.T	..T.T	..GTG	..TGA.CAC	..AC	..A..C	..GA.. 2147
Llactis 23S.SEQ	..TT.G.AC	..GT	..A.G	..A.G.G	..A.G.G	..G.T	..T.T	..GT	..CTGTAG.C	..AC	..A..C	..GA.. 2137
Lmonocytogenes 23S.SEQ	..AT.G.AC	..GT	..A.G	..G.G	..G.G	..G.C	..T.T	..TG	..TGA.CACT	..AC	..A..C	..GA.. 2167
Saureus 23S.SEQ	..CAT.G.AC	..GT	..A.G	..G.G	..G.G	..G.C	..T.T	..AT.C	..GCA.AGCT	..AC	..A..C	..GA.. 2161
Smutans 23S.SEQ	..TT.G.AC	..GT	..A.G	..A.G.G	..A.G.G	..G.C	..T.T	..GT	..CTGTACAC	..AC	..A..C	..GA.. 2134
Spneumonies 23S.SEQ	..TT.G.AC	..GT	..A.G	..A.G.G	..A.G.G	..G.C	..T.T	..GT	..CTGTACAC	..AC	..A..C	..GA.. 2136
Spnogenes 23S.SEQ	..TT.G.AC	..GT	..A.G	..A.G.G	..A.G.G	..G.C	..T.T	..GT	..CTGTACAC	..AC	..A..C	..GA.. 2137
Mavium 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Mtuberculosis 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Ecoli 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Kneumonies 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Hinfluenzae 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Bbrochiseptica 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Bparapertussis 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Bpartussis 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Bcapacia 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Bmallei 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Bpseudomallei 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Ngonorrhoeae 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Neminigitidis 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Paeruginosa 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Vcholerae 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G
Yenterocolitica 23S.SEQ	..C..ACGA.A	..TGGT	..G	..G	..G	..G	..G	..G	..G	..G	..G	..G

FIG. 2B-20

Alignment Report of Gram +8- 23S align.MEG, using Clustal method with Weighted residue weight table.

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[illegible]

FIG. 2B-21

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
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	2260	2270	2280	2290	2300	2310	2320	2330	2340	2350	2360	2370
Baobab 23S.SEQG.....AG.....C.C.A.....CC.C.GAA.....T.A.....TTC.CAG.....T.A.....C.....GG.....ACCT..ANGT.....2398		
Banthracis 23S.SEQ	.....G.....	.....T.....	.....C.C.A.....	.....CC.C.GAA.....	.....T.A.....	.....TTC.TAG.....	.....A.....	.....GG.....	.....ACCT..ANGT.....	.....2394		
Efacialis 23S.SEQ	.....G.....AG.....	.....C.C.A.....	.....CC.C.GAA.....	.....T.A.....	.....TTC.TAG.....	.....T.A.....	.....G.....	.....GG.....	.....ACCT..ANGT.....	.....2384		
Llactis 23S.SEQ	.....G.....	.....C.T.A.....	.....C.C.A.....	.....CC.C.GAT.....	.....T.A.....	.....ATC.TAG.....	.....T.A.....	.....T.A.....	.....A.CT..AA.T.....	.....2373		
Lacnocyogenes 23S.SEQ	.....G.....	.....C.C.A.....	.....CC.C.GAA.....	.....AT.A.....	.....TTC.CAG.....	.....T.A.....	.....C.....	.....GG.....	.....AC.....ANGT.....	.....2404		
Saureus 23S.SEQ	.....G.....AG.....	.....C.T.A.....	.....CC.C.GAA.....	.....T.A.....	.....TTC.CAG.....	.....T.A.....	.....GG.....	.....GG.....	.....ACCT..ANGT.....	.....2398		
Smutans 23S.SEQ	.....G.....	.....C.C.A.....	.....CC.C.GAA.....	.....T.A.....	.....TTC.TAG.....	.....T.A.....	.....T.....	.....GG.....	.....ACA.....ANGT.....	.....2371		
Spneumonias 23S.SEQ	.....G.....AG.....	.....C.C.A.....	.....CC.C.GAA.....	.....T.A.....	.....TTC.CAG.....	.....T.A.....	.....T.....	.....GG.....	.....A.CT..AA.T.....	.....2373		
Spyrogenes 23S.SEQ	.....G.....	.....C.C.A.....	.....CC.C.GAT.....	.....T.A.....	.....ATC.CAG.....	.....T.A.....	.....T.....	.....GG.....	.....A.CT..AA.T.....	.....2374		
Mayium 23S.SEQ	.....TG.....	.....AT.....	.....C.C.A.....	.....CC.C.A.....	.....CA.....	.....T.....	.....CG.....	.....T.....	.....AC.T..ANGT.A.....	.....2586		
Mtubercularis 23S.SEQ	.....TG.....	.....AT.....	.....C.C.A.....	.....CC.C.A.....	.....CA.....	.....T.....	.....CG.....	.....T.....	.....AC.T..ANGT.A.....	.....2609		
Ecoli 23S.SEQ	GGGGGTCCTCTTAACGACGACGAGGTGGCTTAATCTCGTGCAGATCGAGAGTTAGTTCATATGCGATACGACCTGACTCGGCGGTGACCGCGGACGAGG	.....C.....	.....C.....	.....A.....	.....T.....	.....T.....	.....CG.....	.....T.....	.....T.....	.....2370		
Kpneumonias 23S.SEQ	.....C.....	.....C.....	.....T.....	.....AC.....	.....T.....	.....GT.....	.....A.....	.....A.....	.....ACA..ANGT.....	.....2376		
Hinfluenzae 23S.SEQ	.....C.....	.....C.....	.....TT.....	.....AC.....	.....GGTAC.....	.....A.....	.....GT.CT.A.....	.....GT.....	.....T.AC.....A..T.....A.....	.....2337		
Bbrochiseptica 23S.SEQ	.....C.....	.....C.....	.....TT.....	.....AC.....	.....GGTAC.....	.....A.....	.....GT.CT.A.....	.....GT.....	.....T.AC.....A..T.....A.....	.....2339		
Bparapertussis 23S.SEQ	.....C.....	.....C.....	.....TT.....	.....AC.....	.....GGTAC.....	.....A.....	.....GT.CT.A.....	.....GT.....	.....T.AC.....A..T.....A.....	.....2339		
Bpartusis 23S.SEQ	.....C.....	.....C.....	.....T.....	.....AC.....	.....GGTAC.....	.....A.....	.....GT.CT.A.....	.....GT.....	.....ACC..ANGT.....	.....2345		
Bcespacia 23S.SEQ	.....C.....	.....C.....	.....T.....	.....AC.....	.....GGTAC.....	.....A.....	.....GT.CT.A.....	.....GT.....	.....ACC..ANGT.....	.....2348		
Bmalei 23S.SEQ	.....C.....	.....C.....	.....T.....	.....AC.....	.....GGTAC.....	.....A.....	.....GT.CT.A.....	.....GT.....	.....ACC..ANGT.....	.....2348		
Bpsudomallei 23S.SEQ	.....C.....	.....C.....	.....TT.....	.....AC.....	.....GGT.C.....	.....A.....	.....G.ACT.A.....	.....A.....	.....ACC..ANGT.G.....	.....2359		
Ngonorhoeae 23S.SEQ	.....C.....	.....C.....	.....TT.....	.....AC.....	.....GGT.C.....	.....A.....	.....G.ACT.A.....	.....A.....	.....ACC..ANGT.....	.....2358		
Nematinigitidis 23S.SEQ	.....C.....	.....C.....	.....TT.....	.....AC.....	.....GGT.C.....	.....A.....	.....G.ACT.A.....	.....A.....	.....ACA..ACCT.....	.....2358		
Peervginosa 23S.SEQ	.....C.....	.....C.....	.....T.....	.....GC.....	.....C.GA.C.....	.....A.....	.....G.C.CAG.....	.....AT.A.....	.....C.....A.....	.....2353		
Vcholerac 23S.SEQ	.....C.....	.....C.....	.....T.....	.....G.....	.....AC.....	.....T.....	.....GT.....	.....C.....	.....A.....	.....T.....		
Yenterocolitica 23S.SEQ	.....C.....	.....C.....	.....T.....	.....A.....	.....AC.....	.....T.....	.....GT.....	.....C.....	.....A.....	.....T.....		

FIG. 2B-22

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
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FIG. 2B-23

100221" 26662001

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

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	2490	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	2600	2637
Bsubtilis 23S.SEQ													2632
Banthracis 23S.SEQ													2621
Efaecalis 23S.SEQ													2610
Llactis 23S.SEQ													2642
Leuonocytogenes 23S.SEQ													2636
Saureus 23S.SEQ													2609
Smutans 23S.SEQ													2611
Spneumonias 23S.SEQ													2612
Spnogenes 23S.SEQ													2824
Spnium 23S.SEQ													2847
Mtuberculosis 23S.SEQ													2608
Ecoli 23S.SEQ													2614
Kpneumonias 23S.SEQ													2569
Hinfluenzae 23S.SEQ													2571
Bbrochiseptica 23S.SEQ													2570
Bparapertussis 23S.SEQ													2583
Bpertussis 23S.SEQ													2586
Bcepacia 23S.SEQ													2586
Bmallei 23S.SEQ													2597
Bpseudomallei 23S.SEQ													2596
Nymnorhoeae 23S.SEQ													2596
Neminigititidis 23S.SEQ													2591
Paeruginosa 23S.SEQ													2591
Vcholerae 23S.SEQ													2611
Yenterocolitica 23S.SEQ													

FIG. 2B-24

100221" 26E6200T

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

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	2610	2620	2630	40	2650	2660	2670	2680	2690	2700	2710	2720
Baebilla 23S.SEQ	C.T.C.	A.TT	GA	C.G.	TC	TG 2755
Banthracis 23S.SEQ	C.T.	.....	TA	.....	GA	.....	C.G.	.....	TC	.....	TG 2750
Efaealis 23S.SEQ	C.T.C.	.....	T	.....	GA	.....	TT.C.G.	.....	TC	.....	TG 2739
Llactis 23S.SEQ	C.T.C.	.....	TA	.....	GA	.....	TT.C.G.	.....	TC	.....	TG 2728
Imonocytogenes 23S.SEQ	C.T.C.	.....	A	.....	GA	.....	A.C.G.	.....	TC	.....	TG 2760
Saureus 23S.SEQ	C.T.	.....	TA	.....	GA	.....	AT.C.T.	.....	TC	.....	TG 2754
Smutans 23S.SEQ	C.T.C.	.....	AA	.....	GA	.....	TT.C.G.	.....	TC	.....	TG 2729
Spneumonias 23S.SEQ	C.T.C.	.....	TA	.....	GA	.....	TT.C.G.	.....	TC	.....	TG 2730
Spyogenes 23S.SEQ	C.T.C.	.....	TA	.....	GA	.....	TT.C.G.	.....	TC	.....	TG 2942
Mavium 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2965
Mtuberculosis 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2726
Ecoli 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2732
Kneumonias 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2689
Hinfluenzae 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2691
Bbrochiseptica 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2690
Bparapertussis 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2701
Bpertussis 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2704
Bcepacia 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2704
Bmallei 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2713
Bpseudomallei 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2714
Ngonorrhoeae 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2714
Neminigitidis 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2714
Paeruginosa 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2709
Vcholerae 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2709
Yenterocolitica 23S.SEQ	C.C.	.....	TCA	.....	GA	.....	A.C.T.	.....	TC	.....	TG 2729

FIG. 2B-25

Alignment Report of Gram +& 23S align.MEG, using Clustal method with Weighted residue weight table.
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FIG. 2B-26

100222" 2666200T

Alignment Report of Gram +8- 23S align.MEG, using Clustal method with Weighted residue weight table.
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	2850	2860	2870	2880	2890	2900	
Baibtilis 23S.SEQ	G...T.TG..A.CA.A.G...	G...A.A...	CG.T..AG.A...	A-T			2927
Banthracis 23S.SEQ	G...ATG.T..CAT..G...	G...G.GAA...	AG.T..AG.A...	A-T			2922
Biacellis 23S.SEQ	G...GCT..T..ACT.G...	GG..AA...	CGT..AG.A...	A-A			2912
Llactis 23S.SEQ	G...A.TT...GA.T.G...	CG..A...	CGT..AG.A...	T..A-A			2898
Imocycogenes 23S.SEQ	G...T.T...A.A.G...	CG..AA...	CG.T..AG.A...	A-A			2932
Saureus 23S.SEQ	G...ATG.T..CAT..G...	G...G.GAA...	CG.T..AG.A...	T..A-A			2923
Smutans 23S.SEQ	G...TT.T..CA..CA..G...	CG..AA...	CGT..AG.A...	T..A-A			2900
Spneumoniae 23S.SEQ	G...T.TG...CA.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2902
Spyogenes 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2901
Navium 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			3107
Ntuberculosis 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			3138
Ecoli 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2903
Kpneumoniae 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2897
Hinfluenzae 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2865
Hbrochiseptica 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2865
Bparapertussis 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2864
Bpertussis 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2878
Bcepacia 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2882
Bmallei 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2882
Bpseudomallei 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2890
Bgonorrhoeae 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2891
Bneminigitidis 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2891
Bpaeruginosa 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2886
Bcholerae 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			2906
Benterocolitica 23S.SEQ	G...T.T...A.A.GT...	CG..TAA...	AGCT..AG.A...	T..A-A			

FIG. 2B-27

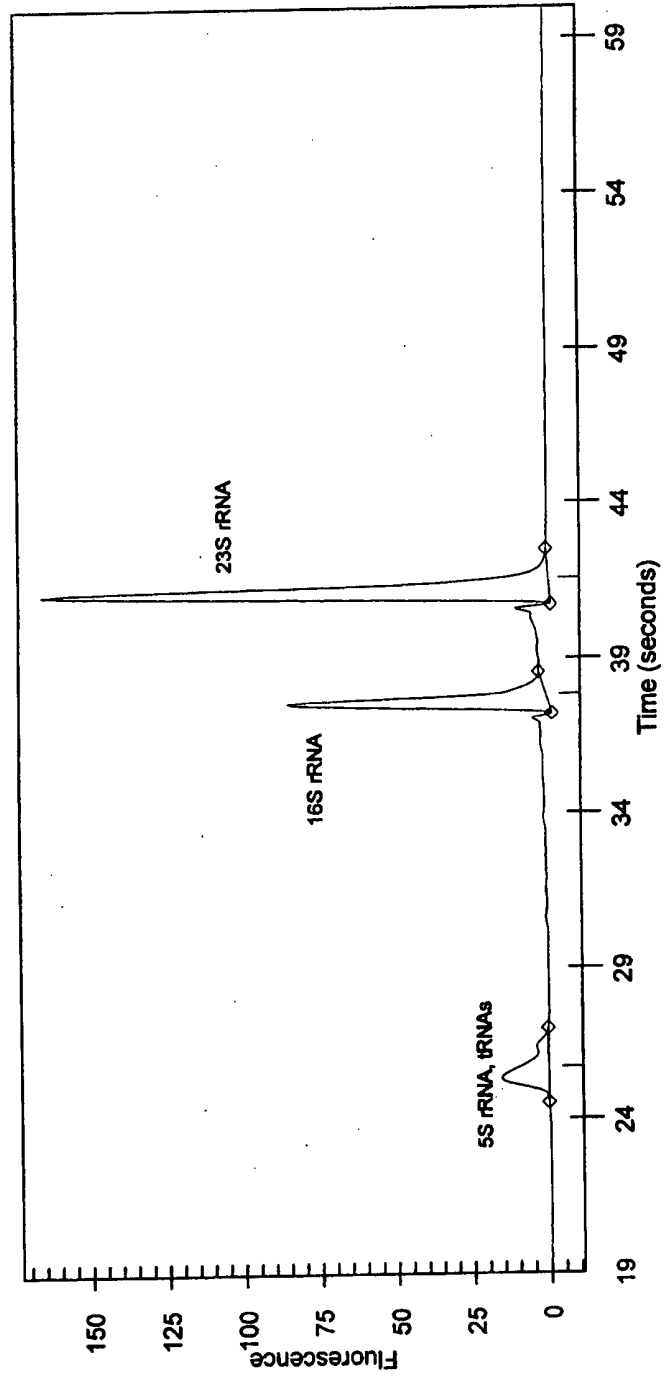


FIG. 3

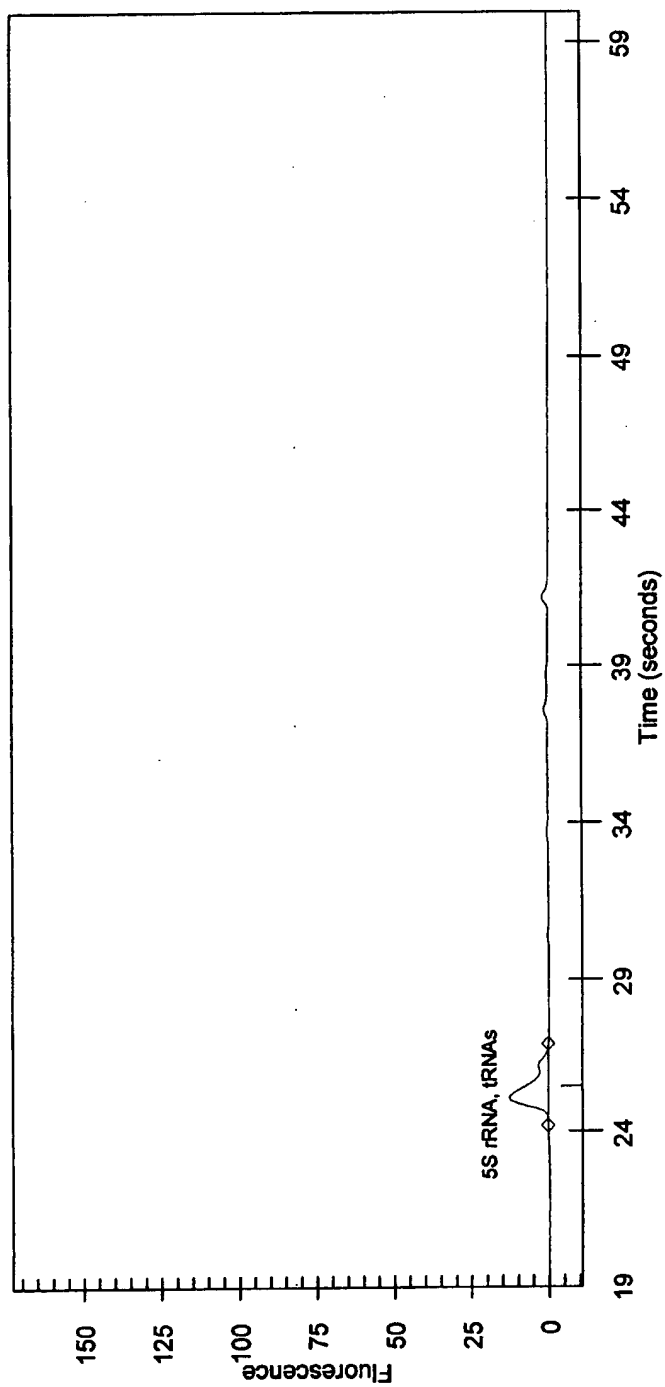


FIG. 4

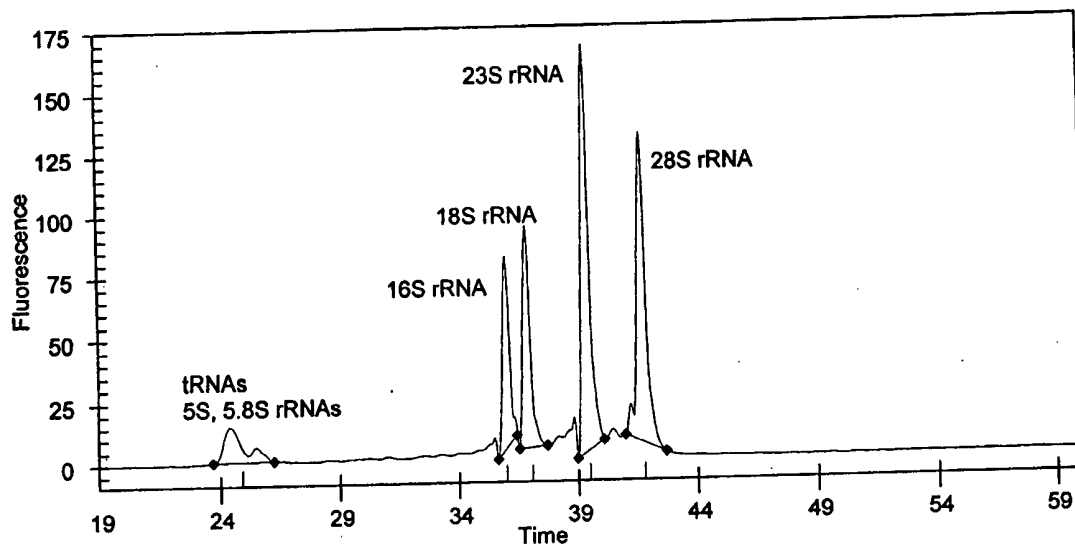


FIG. 5A

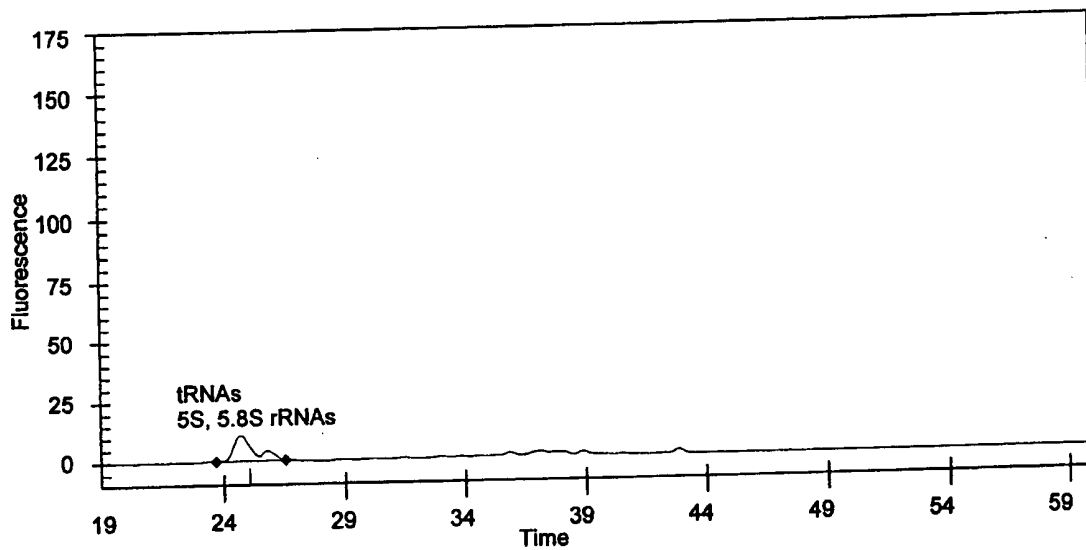


FIG. 5B

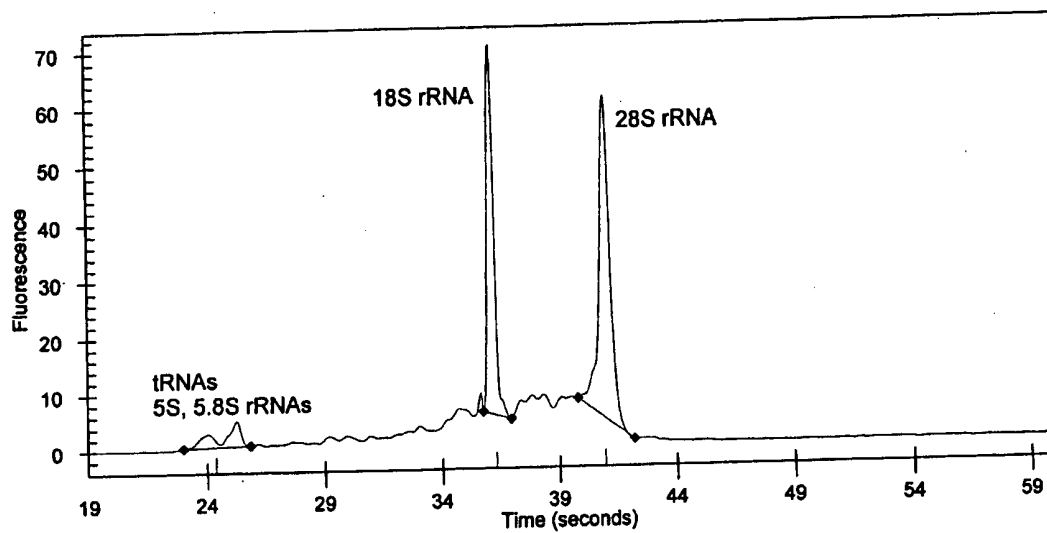


FIG. 6A

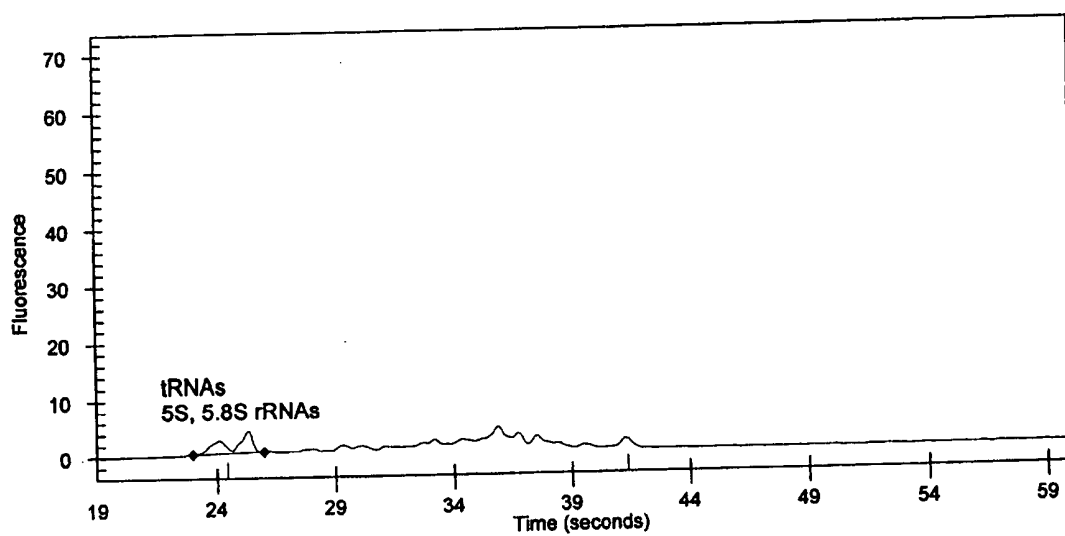


FIG. 6B

100227 2662001

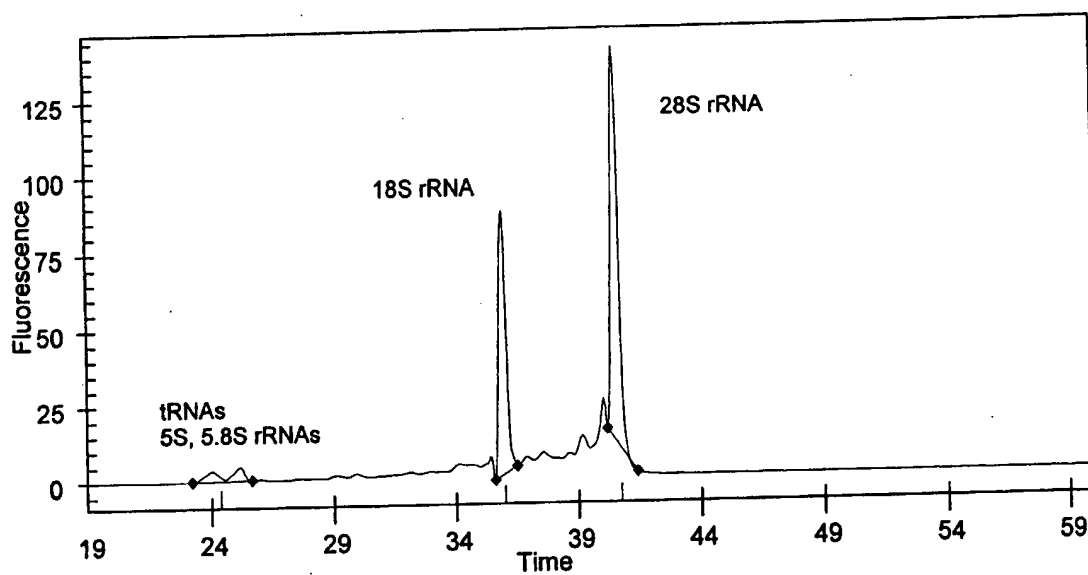


FIG. 7A

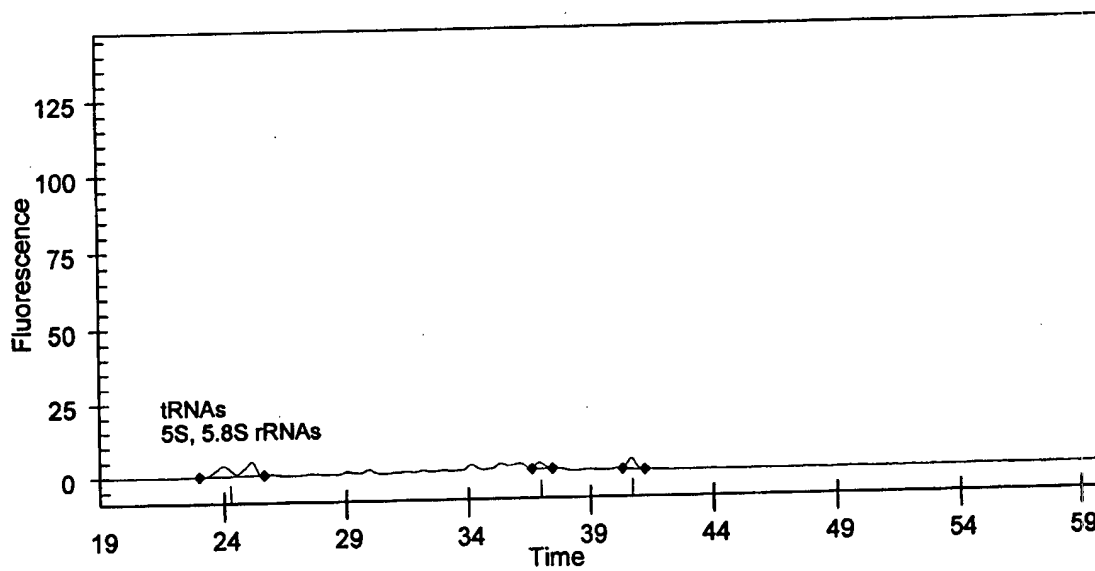


FIG. 7B

1002937 123001

100227 4662001

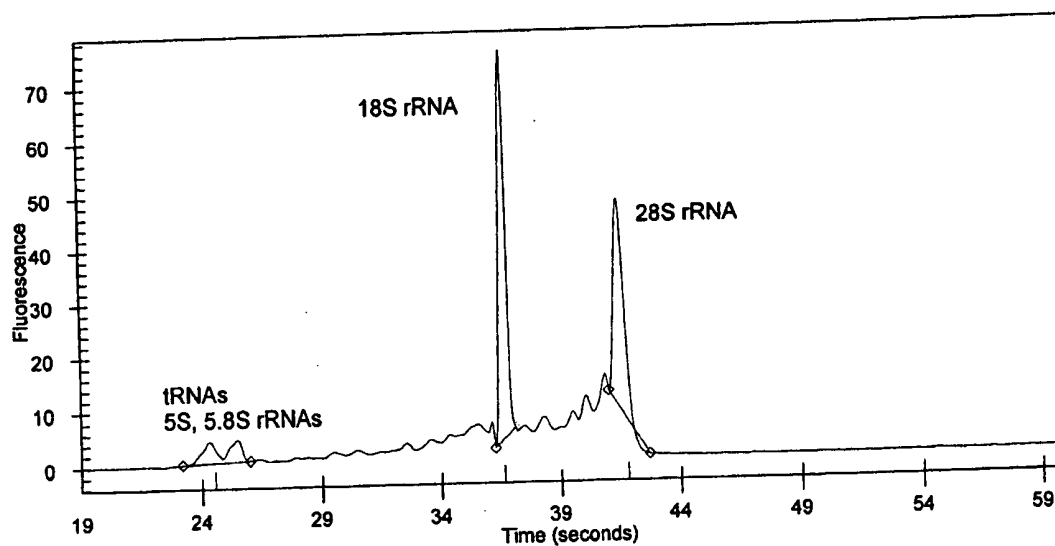


FIG. 8A

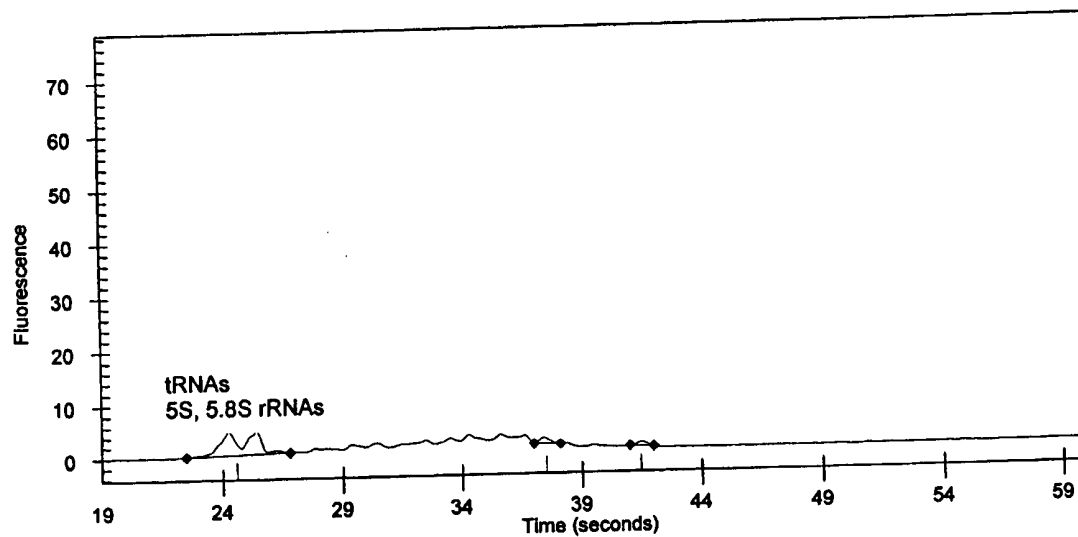


FIG. 8B